

TCGACCCACGCGTCCGGGAGGATCGGGAGTTCGCGGGAGGATGGGCCGCCGCTAGGCTCGCACTCCGGA  
CGCGCCTCGC  
AGTGCGCAGGGTGGGTGCCCCGCGCCTGCAGCGTCCGCCGGGGCGGCGCGGCGGGAGGTGGCCGACAG  
GCTCCGGGCC  
TCGCAGCCTCAGCCCCCGGCCAGCGCGCTTTCGACGGCGGCGCCGCGCCGAGCCACCCGCC  
CGCCCAAGGTCTCTCGCGGGCGGGAGAACGGAAACTCCCAACTTCCTGAGTCTAAAGTTCCTGTTG  
CTTCAGACAA  
TGGATGAGCAATCACAAGGAATGCAAGGGCCACCTGTTTCCTCAGTTCCAACCACAGAAGGCCTTACGA  
CCGGATATGG  
GCTATAATACATTAGCCAACTTTTCGAATAGAAAAGAAAATTGGTTCGCGGACAATTTAGTGAAG  
TTTATAGAGCAGCCTGTCTCTTGGATGGAGTACCAGTAGCTTTAAAAAAGTGCAGATATTTGATTTA  
ATGGATGCCA  
AAGCACGTGCTGATTGCATCAAAGAAATAGATCTTCTTAAGCAACTCAACCATCCAAATGTAATAAAA  
TATTATGCAT  
CATTCATTGAAGATAATGAACTAAACATAGTTTTTGGAACTAGCAGATGCTGGCGACCTATCCA  
GAATGATCAAGCATTTTAAAGAAGCAAAAGAGGCTAATTCCTGAAAGAACTGTTTGAAGTATTTTGT  
CAGCTTTGCA  
GTGCATTGGAACACATGCATTCTCGAAGAGTCATGCATAGAGATATAAAACCAGCTAATGTGTTTCA  
ACAGCCACTG  
GGGTGGTAAAACTTGGAGATCTTGGGCTTGGCCGGTTTTTCAGCTCAAAAACCACAGCTGCAC  
ATTCTTTAGTTGGTACGCCCTTATTACATGTCTCCAGAGAGAATACATGAAAATGGATACAACCTTCAA  
TCTGACATCT  
GGTCTCTTGGCTGTCTACTATATGAGATGGCTGCATTACAAAGTCCTTTCTATGGTGACAAAATGAAT  
TTATACTCAC  
TGTGTAAGAAGATAGAACAGTGTGACTACCCACCTCTTCCTTCAGATCACTATTCAGAAGAAC  
TCCGACAGTTAGTTAATATGTGCATCAACCAGATCCAGAGAAGCGACCAGACGTCACCTATGTTTAT  
GACGTAGCAA  
AGAGGATGCATGCATGCACTGCAAGCAGCTAAACATGCAAGATCATGAAGAGTGTAACCAAAGTAATT  
GAAAGTATTT  
TGTGCAAAGTCGTACCTSCCATTATGTCTGGGTGTTAAGATTAATATTTTCAGAGCTAGTGT  
GCTCTGAATCCTTAACCAGTTTTTCATATAAGCTTCATTTTGTACCAGTCACCTAAATCACCTCCTTGC  
AACCCCAAA  
TGACTTTGGAATAACTGAATTGCATGTTAGGAGAGAAAATGAAACATGATGGTTTTGAATGGCTAAAG  
GTTTATAGAA  
TTTCTTACAGTTTTCTGCTGATAAATTGTGTTTAGATAGACTGTCAGTGCCAAATATTGAAG  
TGCAGCTTGGCACACATCAGAATAGACTCATACCTGAGAAAAAGTATCTGAACATGTGACTTGTCTTCT  
TTTTTAGTAA  
TTTATGGACATTGAGATGAACACAATTGTGAACTTTTGTGAAGATTTTATTTTAAACGTTTGAAGTA  
CTAGTTTTAG  
TTCTTAGCAGAGTAGTTTTCAAATATGATTCTTATGATAAATGTAGACACAACTATTTGAGA  
AACATTTAGAACTCTTAGCTTATACATTCAAATGTAACCTATTAAATGTGAAGATTTGGGGACAAAAT  
GTGAGTCAGA  
CACTGAAGAGTTTTTTGTTTTGTTTTAATATTTTTGATATTCTCTTGCATTGAAATGGTATAAATGA  
ATCCATTTAA  
AAAGTGGTTAAGGATTTGTTTAGCTGGTGTGATAATAATTTTTAAAGTTGCACATTGCCCAAG  
GCTTTTTTTGTGTGTTTTATGTTGTTTGTACATTTGAAAAATATCTTTGAATAACCTTGCAGTAC  
TATATTTCAA

TTTCTTTATAAATTTAAGTGCATTTTAACTCATAATTGTACACTATAATATAAGCCTAAGTTTTTATT  
 CATAAGTTTT  
 ATTGAAGTTCTGATCGGTCCCCTTCAGAAATTTTTTTATATTATTCTTCAAGTTACTTTCTTA  
 TTTATATTGTATGTGCATTTTATCCATTAATGTTTCATACTTTCTGAGAGTATAATACCCTTTTAAA  
 GATATTTGGT  
 ATACCAATACTTTTCCTGGATTGAAAACTTTTTTTAAACTTTTTTAAAATTTGGGCCACTCTGTATGCA  
 TATGTTTGGT  
 CTTGTAAAGAGGAAGAAAGGATGTGTGTTATACTGTACCTGTGAATGTTGATACAGTTACAA  
 TTTATTTGACAAGGTTGTAATCTAGAAATATGCTTAATAAAATGAAAACCTGGCCATGACTACAGCCAG  
 AACTGTTATG  
 AGATTAACATTTCTATTGAGAAGCTTTTGAGTAAAGTACTGTATTTGTTTCATGAAGATGACTGAGATG  
 GTAACACTTC  
 GTGTAGCTTAAGGAAATGGGCAGAAATTCGTAAATGCTGTTGTGCAGATGTGTTTTCCCTGAA  
 TGCTTTTCGTATTAGTGGCGACCAGTTTCTCACAGAATTGTGAAGCCTGAAGGCCAAGAGGAAGTCACT  
 GTTAAAGGAC  
 TCTGTGCCATCTTACAACCTTGGATGAATTATCCTGCCAACGTGAAAACCTCATGTTCAAAGAACACT  
 TCCCTTTAGC  
 CGATGTAACCTGCTGGTTTTGTGTTTTTCATATGTGTTTTTCTTACACTCATTGGAATGCTTTCAA  
 GCATTTGTAAACTTAAAAAANWAWAAAGGGCAAAAGTCTGAACCCTTGTTTTCTGAAATCTAATC  
 AGTTATGTAT  
 GGTTCCTGAAGGGTAATTTTATTTTGAATAGGTAAAGCGAAACCTGTTTTGTCWTGTTTTTCCTGAG  
 GGCTAGATGC  
 ATTTTTTTTCTCACACTCTTAATGACTTTTAAACATTTATACTGAGCATCCATAGATATATTCC  
 TAGAAGTATGAGAAGAATTATTCTTATTGACCATTAATGTCATGTTTCAATTTAATGTAATATAATTGA  
 GATGAAATGT  
 TCTCTGGTTGGAACAGATACTCTTTTTTTTTTCTTGCAATCTTTAAGAATACATAGATCTAAAATTC  
 ATTAGCTTGA  
 CCCCTCAAAGTAACTTTTAAAGTAAAGATTAAAGCTTTTCTTCTCAGTGAATATATCTGCTAGA  
 AGGAAATAGCTGGGAAGAATTAAATGATCAGGGAAATTCATTATTTCTATATGTGGAACTTTTGTCT  
 TCGAATATTG  
 TATCTTTTTTAAATCTAAATGTTTCATATTTTCTGGAAGAAACCACTGTGTAAAAATCAAATTTAATT  
 TTGAATGGAA  
 TAATTTCAAAGAACTATGAAGATGATTTGAAGCTCTAATTTATATAGTCACCTATAAAATGTT  
 CTTTATATGTGTTTCATAAGTAAATTTTATATTGATTAAGTTAAACTTTTGAATTGATTTGAGGAGCAG  
 TAAATGAAA  
 GCTATATCTATTNCTAAACCYTATTTAGACATTGGKACCAGTTACCCAGGTGAAAATAKGGAGTAACT  
 TTGTTTTGTA  
 TGGTAAGGTTTAGGAATGGNGGATGAAGGGTATCTCTATATAAATAAAGTGCTCAACAATGTG  
 CAATGATTGTAAATTTAGTAAGATATTACAGCCATTTTCATGAATGCTTTACCATTCAACATAGTATCT  
 ATTACAAAAC  
 ACCTTTCTTGATCCATATACTTCAGGTGTTGCTGTTAACATTTACTATGATATTTATTTAACCAAA  
 ATGTTACTCA  
 CATTAAATGTTTATTCTTTTAAATGAATGTATTATGTTTTTAACCCACAAATGCATACTTACC  
 CTGTGCCTCATATTTCAATAGTACTGTAATATGGACATCTTTTGTGAAATACTTTTATTTTGTATGC  
 TTTAAATATA  
 CATACAAAAAGATTTCTGTTATTAGCTTTGAAAATTGTATAATATCCTAATATAAACAAAAATATAAA  
 AATAAAATG  
 AATACAGTAAAAAAGG

Fig. 1 (continued)

MDEQSQGMQGPPVPQFQPOKALRPDMGYNTLANFRIEKKIGRGQFSEVYRAACLLDGVVVALKKVQIF  
DLMDAKARAD  
CIKEIDLLKQLNHPNVIKYYASFIEDNELNIVLELADAGDLSRMIKHFKKQKRLIPERTVWKYFVQLC  
SALEHMHSSRR  
VMHRDIKPANVFITATGVVKLGDLGLGRFFSSKTTAAHSLVGTPYYMSPERIHENGYNFKSDI  
WSLGCLLYEMAALQSPFYGDKMNLVSLCKKIEQCDYPPLPSDHYSEELRQLVNMCIINPDPEKRPDVTY  
VYDVAKRMHA  
CTASS

Fig. 1 (continued)

**SECRET**

GTCGACCCACGCGTCCGGTGAAGTATAATACTTTGTGATTATGAGATGTCGTCTCTCGG  
 TGCTCTCTTTGTGCAAATTAATTTGATGACTTGCAGTTTTTTTGAAAACCTGCGGTGGAGG  
 AAGTTTTGGGAGTGTTTATCGAGCCAAATGGATATCACAGGACAAGGAGGTGGCTGTAAA  
 GAAGCTCCTCAAAATAGAGAAAGAGGCCAGAAATACTCAGTGTCTCAGTCACAGAAACAT  
 CATCCAGTTTTATGGAGTAATTCTTGAACCTCCCAACTATGGCATTGTACAGAATATGC  
 TTCTCTGGGATCACTCTATGATTACATTAACAGTAACAGAAGTGAGGAGATGGATATGGA  
 TCACATTATGACCTGGGCCACTGATGTAGCCAAAGGAATGCATTATTTACATATGGAGGC  
 TCCTGTCAAGGTGATTCACAGAGACCTCAAGTCAAGAAACGTTGTTATAGCTGCTGATGG  
 AGTACTGAAGATCTGTGACTTTGGTGCCTCTCGGTTCCATAACCATAACAACACATGTC  
 CTTGGTTGGAACTTTCCCATGGATGGCTCCAGAAGTTATCCAGAGTCTCCCTGTGTCAGA  
 AACTTGTGACACATATTCCTATGGTGTGGTTCTCTGGGAGATGCTAACAAGGGAGGTCCC  
 CTTTAAAGGTTTGGGAAGGATTACAAGTAGCTTGGCTTGTAGTGGAAAAAACGAGAGATT  
 AACCATTCCAAGCAGTTGCCCCAGAAGTTTTGCTGAACTGTTACATCAGTGTGGGAAGC  
 TGATGCCAAGAAACGGCCATCATTCAAGCAAATCATTTCATCCTGGAGTCCATGTCAA  
 TGACACGAGCCTTCCTGACAAGTGTAACCTCATTCCTACACAACAAGCGGAGTGAGGGTG  
 CGAAATTGAGGCAACTCTTGAGAGGCTAAAGAACTAGAGCGTGATCTCAGCTTTAAGGA  
 GCAGGAGCTTAAAGAACGAGAAAGACGTTTAAAGATGTGGGAGCAAAGCTGACAGAGCA  
 GTCCAACACCCCGCTTCTCTTGCTGCAAGAATGTCTGAGGAGTCTTACTTTGA  
 ATCTAAACAGAGGAGTCAAACAGTGCAGAGATGTCATGTCAGATCACAGCAACAAGTAA  
 CGGGGAGGGCCATGGCATGAACCCAAGTCTGCAGGCCATGATGCTGATGGGCTTTGGGGA  
 TATCTTCTCAATGAACAAAGCAGGAGCTGTGATGCATTCTGGGATGCAGATAAACATGCA  
 AGCCAAGCAGAAATCTTCCAAAACCACATCTAAGAGAAGGGGGAAGAAAGTCAACATGGC  
 TCTGGGGTTTCAAGTATTTTACTTGTGTCAGAAGGTGACGATGATGATGATGACGGTGA  
 GGAGGAGGATAATGACATGGATAATAGTGAATGAAAGCAGAAAGCAAAGTAATAAAATCA  
 CAAATGTTTGGAAAACACAAAAGTAACCTGTTTATCTCAGTCTGTACAAAAACAGTAAGG  
 AGGCAGAAAGCCAAGCACTGCATTTTTTAGGCCAATCACATTTACATGACCGTAATTTCTT  
 ATCAATTCTACTTTTATTTTTTGCTTACAGAAAAACGGGGGAGAATTAAGCCAAAGAAGT  
 ATATTTATGAATCAGCAAATGTGGTGCCTGATTATAGAAATTTGTGATCCTATATACAAT  
 ATAGGACTTTTAAAGTTGTGACATCTGGCTTTTTCTTTTAAATGAATACTTTTTTAGTTTG  
 TATTTGACTTTTATTTCTTTTATTCAAATCATTTTTTAAAACTTACATTTTGAACAAACAC  
 TCTTAACTCCTAATGTTCTTTGACACGTAGTAATTCTGTGACATACTTTTTTTTTCTTA  
 TAGCAATACACTGTAATATCAGAAATGGTTGGCCTGAGCAACCTAGTAAGACCTCGTCTC  
 TACTAATAATTAAAAACTAGCTGGCATGGTAGCACACACCTGTAGTCCCAGATACTTGG  
 GAGGCCAAGGCAGGAGGATTGCTTGAGACCTAGCAATCAGTCAGGGCTGCAGTGAGCCAT  
 GATGGCACCCTGCACTCTAGCCTGGGCAAGAGAACAAGATCCTGTCTCAAAAAACAAA  
 AAAAAAAAAGGGCGGCCG

MSSLGASFVQIKFDDLQFFENC GGGSFGSVYRAKWI SQDKEVAVK  
KLLKIEKEAEILSVLSHRNIIQFYGVILEPPNYGIVTEYASLGSLYDYINSNRSEEMDM  
HIMTWATDVAKGMHYLHMEAPVKVIHRDLKSRNVVIAADGVLKICDFGASRFHNHTTHMS  
LVGTFPWPMAPEVIQSLPVSETCDTYSYGVVLWEMLTREVPPFKGLEGLQVAWLVEKNERL  
TIPSSCPRSFAELLHQWEADAKRPSFKQIISILESMSNDTSLPDKCNSFLHNKAEWRC  
EIEATLERLKKLERDLSFKEQELKERERRLKMWEQKLTEQSNTPLLLPLAARMSEESYFE  
SKTEESNSAEMSCQITATSNGEGHGMNPSLQAMMLMGFGDIFSMNKAGAVMHSGMQTNMQ  
AKQNSSKTTSKRRGKKVNMA LGFSDFDLSEGDDDDDDGEEEDNDMDNSE

CGGTGGTGGCGGCAGCGGCGGCTGCGGGGGCACCGGGCCGCGGCCACCATGGCCGTGC  
GACAGGCGCTGGGCCGCGGCCTGCAGCTGGGTGCGAGCGCTGCTGCTGCGCTTCACGGGCA  
AGCCCGGCCGGGCTACGGCTTGGGGCGGCGGGCCCGGCGGCGGGCTGTGTCCGCGGGG  
AGCGTCCAGGCTGGGCCGAGGACCGGGCGCGGAGCCTCGCAGGGTCGGGCTCGGGCTTC  
CTAACCGTCTCCGCTTCTTCCGCCAGTCGGTGGCCGGGCTGGCGGCGCGGTTCAGCGGC  
AGTTCGTGGTGCGGGCCTGGGGCTGCGCGGGCCCTTGCGGCCGGGCAGTCTTTCTGGCCT  
TCGGGCTAGGGCTGGGCCTCATCGAGGAAAAACAGGCGGAGAGCCGGCGGGCGGTCTCGG  
CCTGTCAGGAGATCCAGGCAATTTTTTACCCAGAAAAGCAAGCCGGGGCCTGACCCGTTGG  
ACACGAGACGCTTGCAGGGCTTTTCGGCTGGAGGAGTATCTGATAGGGCAGTCCATTGGTA  
AGGGCTGCAGTGCTGCTGTGTATGAAGCCACCATGCCTACATTGCCCCAGAACCTGGAGG  
TGACAAAGAGCACCGGGTTGCTTCCAGGGAGAGGCCCAGGTACCAGTGCACCAGGAGAAG  
GGCAGGAGCGAGCTCCGGGGGGCCCTGCCTTCCCCCTTGGCCATCAAGATGATGTGGAACA  
TCTCGGCAGGTTCCCTCCAGCGAAGCCATCTTGAACACAATGAGCCAGGAGCTGGTCCCAG  
CGAGCCGAGTGGCCTTGGCTGGGGAGTATGGAGCAGTCACTTACAGAAAATCCAAGAGAG  
GTCCCAAGCAACTAGCCCCCTACCCCAACATCATCCGGGTTCTCCGCGCCTTCACCTCTT  
CCGTGCCGCTGCTGCCAGGGGGCCCTGGTTCGACTACCCTGATGTGCTGCCCTCACGCCTCC  
ACCCTGAAGGCCTGGGCCATGGCCGGACGCTGTTCTCTGTTATGAAGAACTATCCCTGTA  
CCCTGCGCCAGTACCTTTGTGTGAACACACCCAGCCCCCGCCTCGCCGCCATGATGCTGC  
TGCAGCTGCTGGAAGGCGTGGACCATCTGGTTCAACAGGGCATCGCGCACAGAGACCTGA  
AATCCGACAACATCCTTGTGGAGCTGGACCCAGACGGCTGCCCTGGCTGGTGATCGCAG  
ATTTTGGCTGCTGCCCTGGCTGATGAGAGCATCGGCCTGCAGTTGCCCTTCAGCAGCTGGT  
ACGTGGATCGGGGCGGAAACGGCTGTCTGATGGCCCCAGAGGTGTCCACGGCCCGTCTG  
GCCCCAGGGCAGTGATTGACTACAGCAAGGCTGATGCCTGGGCAGTGGGAGCCATCGCCT  
ATGAAATCTTCGGGCTTGTCAATCCCTTCTACGGCCAGGGCAAGGCCACCTTGAAAGCC  
GCAGCTACCAAGAGGCTCAGCTACCTGCACTGCCCCGAGTCAGTGCCTCCAGACGTGAGAC  
AGTTGGTGAGGGCACTGCTCCAGCGAGAGGCCAGCAAGAGACCATCTGCCCGAGTAGCCG  
CAAATGTGCTTCATCTAAGCCTCTGGGGTGAACATATTCTAGCCCTGAAGAATCTGAAGT  
TAGACAAGATGGTTGGCTGGCTCCTCCAACAATCGGCCGCCACTTTGTTGGCCAACAGGC  
TCACAGAGAAGTGTTGTGTGGAAACAAAAATGAAGATGCTCTTTCTGGCTAACCTGGAGT  
GTGAAACGCTCTGCCAGGCAGCCCTCCTCCTCTGCTCATGGAGGGCAGCCCTGTGATGTC  
CCTGCATGGAGCTGGTGAATTACTAAAAGAACTTGGCATCCTCTGTGTGCTGATGGTCTG  
TGAATGGTGAGGGTGGGAGTCAGGAGACAAGACAGCGCAGAGAGGGCTGGTTAGCCGGAA  
AAGGCCTCGGGCTTGGCAAATGGAAGAACTTGAGTGAGAGTTCAGTCTGCAGTCTCTGTC  
TCACAGACATCTGAAAAGTGAATGGCCAAGCTGGTCTAGTAGATGAGGCTGGACTGAGGA  
GGGGTAGGCCCTGCATCCACAGAGAGGATCCAGGCCAAGGCACTGGCTGTCAGTGGCAGAG  
TTTGGCTGTGACCTTTGCCCCCTAACACGAGGAACTCGTTTGAAGGGGGCAGCGTAGCATG  
TCTGATTTGCCACCTGGATGAAGGCAGACATCAACATGGGTGAGCACGTTTCAGTTACGGG  
AGTGGGAAATTACATGAGGCCTGGGCCTCTGCGTTCCCAAGCTGTGCGTTCTGGACCAGC  
TACTGAATTATTAATCTCACTTAGCGAAAGTGACGGATGAGCAGTAAGTAAGTAAGTGTG  
GGGATTTAACTTGAGGGTTTCCCTCCTGACTAGCCTCTCTTACAGGAATTGTGAAATAT  
TAAATGCAAAATTTACAACCTGCAAAAAAAAAAAAAAAAAAAAAAAAAAGGGCGGCC

Fig. 3





Gly Ser Ser Ser Glu Ala Ile Leu Asn Thr Met Ser Gln Glu Leu Val  
 230 235 240

Pro Ala Ser Arg Val Ala Leu Ala Gly Glu Tyr Gly Ala Val Thr Tyr  
 245 250 255

Arg Lys Ser Lys Arg Gly Pro Lys Gln Leu Ala Pro His Pro Asn Ile  
 260 265 270

Ile Arg Val Leu Arg Ala Phe Thr Ser Ser Val Pro Leu Leu Pro Gly  
 275 280 285 290

Ala Leu Val Asp Tyr Pro Asp Val Leu Pro Ser Arg Leu His Pro Glu  
 295 300 305

Gly Leu Gly His Gly Arg Thr Leu Phe Leu Val Met Lys Asn Tyr Pro  
 310 315 320

Cys Thr Leu Arg Gln Tyr Leu Cys Val Asn Thr Pro Ser Pro Arg Leu  
 325 330 335

Ala Ala Met Met Leu Leu Gln Leu Leu Glu Gly Val Asp His Leu Val  
 340 345 350

Gln Gln Gly Ile Ala His Arg Asp Leu Lys Ser Asp Asn Ile Leu Val  
 355 360 365 370

Glu Leu Asp Pro Asp Gly Cys Pro Trp Leu Val Ile Ala Asp Phe Gly  
 375 380 385

Cys Cys Leu Ala Asp Glu Ser Ile Gly Leu Gln Leu Pro Phe Ser Ser  
 390 395 400

Trp Tyr Val Asp Arg Gly Gly Asn Gly Cys Leu Met Ala Pro Glu Val  
 405 410 415

Ser Thr Ala Arg Pro Gly Pro Arg Ala Val Ile Asp Tyr Ser Lys Ala  
 420 425 430

Fig. 3 (continued)

Asp Ala Trp Ala Val Gly Ala Ile Ala Tyr Glu Ile Phe Gly Leu Val  
 435 440 445 450  
 Asn Pro Phe Tyr Gly Gln Gly Lys Ala His Leu Glu Ser Arg Ser Tyr  
 455 460 465  
 Gln Glu Ala Gln Leu Pro Ala Leu Pro Glu Ser Val Pro Pro Asp Val  
 470 475 480  
 Arg Gln Leu Val Arg Ala Leu Leu Gln Arg Glu Ala Ser Lys Arg Pro  
 485 490 495  
 Ser Ala Arg Val Ala Ala Asn Val Leu His Leu Ser Leu Trp Gly Glu  
 500 505 510  
 His Ile Leu Ala Leu Lys Asn Leu Lys Leu Asp Lys Met Val Gly Trp  
 515 520 525 530  
 Leu Leu Gln Gln Ser Ala Ala Thr Leu Leu Ala Asn Arg Leu Thr Glu  
 535 540 545  
 Lys Cys Cys Val Glu Thr Lys Met Lys Met Leu Phe Leu Ala Asn Leu  
 550 555 560  
 Glu Cys Glu Thr Leu Cys Gln Ala Ala Leu Leu Leu Cys Ser Trp Arg  
 565 570 575  
 Ala Ala Leu

Fig. 3 (continued)



GTCGACCCACGCGGTCCGCCCACGCGTTCCGGAGACATGTCTCTGTGTTTC  
TCTCCCCCTCCGCTTTTGTAGTCCGTTGAAGACACAATTTCTCTCTGTCTCGGGT  
GCTTAGGAGGAGCTCCATGAACATGTATTGAATTGGACTTAGCTGAACAG  
GCTGCTGGTTGGCTGCCCAGAGGGGGCAGGCTGTGTTGCTGGGAGCCTTC  
CAGCTCCCTGCAGCAGTCATGGGGCAGGGTTCCCCGAGTCCGTAATCCCC  
ATTTCCACCTACTTTCCCTTAGTTATTTGATTCCCTGTCTGTCTGTAATCAGC  
TTAAGTGGAGCATCCCCCTTCTCTGGGAGACACGAAGCAGGAAACACTGGC  
AAATATCACAGCAGTGAGTTACGACTTTGATGAGGAATTCTTCAGCCAGA  
CGAGCGAGCTGGCCAAGGACTTTATTCGGAAGCTTCTGGTTAAAGAGACC  
CGGAAACGGCTCACAATCCAAGAGGCTCTCAGACACCCCTGGATCACGCC  
GGTGGACAACCAGCAAGCCATGGTGCGCAGGGAGTCTGTGGTCAATCTGG  
AGAACTTCAGGAAGCAGTATGTCCGCAGGCGGTGGAAGCTTTCCTTCAGC  
ATCGTGTCCCTGTGCAACCACCTCACCCGCTCGCTGATGAAGAAGGTGCA  
CCTGAGGCCGGATGAGGACCTGAGGAAGTGTGAGAGTGACACTGAGGAG  
GACATCGCCAGGAGGAAAGCCCTCCACCCACGGAGGAGGAGCAGCACCT  
CCTAACTGGCCTGACCTGCAGTGGCCGCCAGGGAGGTCTGGGCCCAGCGG  
GGCTCCCTTCTGTGCAGACTTTTGGACCCAGCTCAGCACCCAGCACCCGGGC  
GTCCTGAGCACTTTGCAAGAGAGATGGGCCCAAGGAATTCAGAAGAGCTT  
GCAGGCAAGCCAGGAGACCTGGGAGCTGTGGCTGTCTTCTGTGGAGGAG  
GCTCCAGCATTCCCAAAGCTCTTAATTCTCCATAAAATGGGCTTTCCTCTG  
TCTGCCATCCTCAGAGTCTGGGGTGGGAGTGTGGACTTAGGAAAACAATA  
TAAAGGACATCCTCATCATCACGGGGTGAAGGTCAGACTAAGGCAGCCTT  
CTTCACAGGCTGAGGGGGTTCAGAACCAGCCTGGCCAAAATACACCAG  
AGAGACAGAGTCTCCCCATTGGGAACAGGGTGATTGAGGAAAGTGAACC  
TTGGGTGTGAGGGACCAATCCTGTGACCTCCCAGAACCATGGAAGCCAGG  
ACGTCAGGCTGACCAACACCTCAGACCTTCTGAAGCAGCCCATTGCTGGC  
CCGCCATGTTGTAATTTTGCTCATTTTATTAAGTCTTGGTTTACCTGATG  
CTTGGCTTCTTTTAGGGCTACCCCCATCTCATTTCTTCTTAGCCCCGTGTGCCT  
GTAATCTGAGGGGGGGGCACCCAGTGGGGTGCTGAGTGGGCAGAATCTCA  
GAAGGTCCTCCTGAACCGTCCGCGCAGGCCTGCAGTGGGCCTGCCTCCTC  
CTTGCTTCCCTAACAGGAAGGTGTCCAGTTCAAGAGAACCCACCCAGAGA  
CTGGGAGTGGTGGCTCACGCCTATAATCCCTGCGCTTTGGCAGTCCGAGG  
CAGGGGAATTGCTTGAACCTCAGGAGTTGGAGACCAGCCTGGGCAACATGG  
CAAAACGCAGTCTGTACAAAAAATACAAAAAATTAGCCAGGTGTAGGGGT  
AGGCACCTGGCATCCCAGCTACTCCAGGGGCTGAGGTGACAGCATTGCTT  
AAGCCCAGAAGGTGAGGCTGCAGTGAGCTGAGATCACGCCACTGCACTC  
CAGTCTGGGTGACAGAGAGAGACCATATCCAAAAAAGGG  
CGGCCGC

LFDSL SVVLSLSGASPFLGDTKQETLANITAVSYDFDEEFFSQTSELAKDFIRKL  
LVKETRKRLTIQEALRHPWITPVDNQQAMVRRESVNVLENFRKQYVRRRWK  
LSFSIVSLCNHLTRSLMKVHLRPDEDLRNCESDTEEDIARRKALHPRRRSSTS

Fig. 4

T	A	L	A	K	E	L	R	E	L	R	I	E	E	T	N	R	P	M	19	
G	ACG	GCA	TTA	GCC	AAA	GAA	CTA	AGA	GAA	CTC	CGG	ATT	GAA	GAA	ACA	AAC	CGC	CCA	ATG	57
K	K	V	T	D	Y	S	S	S	S	E	E	S	E	S	S	E	E	E	E	39
AAG	AAG	GTG	ACT	GAT	TAC	TCC	TCC	TCC	AGT	GAG	GAG	TCA	GAA	AGT	AGC	GAG	GAA	GAG	GAG	117
E	D	G	E	S	E	T	H	D	G	T	V	A	V	S	D	I	P	R	L	59
GAA	GAT	GGA	GAG	AGC	GAG	ACC	CAT	GAT	GGG	ACA	GTG	GCT	GTC	AGC	GAC	ATA	CCC	AGA	CTG	177
I	P	T	G	A	P	G	S	N	E	Q	Y	N	V	G	M	V	G	T	H	79
ATA	CCA	ACA	GGA	GCT	CCA	GGC	AGC	AAC	GAG	CAG	TAC	AAT	GTG	GGA	ATG	GTG	GGG	ACG	CAT	237
G	L	E	T	S	H	A	D	S	F	S	G	S	I	S	R	E	G	T	L	99
GGG	CTG	GAG	ACC	TCT	CAT	GCG	GAC	AGT	TTC	AGC	GGC	AGT	ATT	TCA	AGA	GAA	GGA	ACC	TTG	297
M	I	R	E	T	S	G	E	K	K	R	S	G	H	S	D	S	N	G	F	119
ATG	ATT	AGA	GAG	ACG	TCT	GGA	GAG	AAG	AAG	CGA	TCT	GGC	CAC	AGT	GAC	AGC	AAT	GGC	TTT	357
A	G	H	I	N	L	P	D	L	V	Q	Q	S	H	S	P	A	G	T	P	139
GCT	GGC	CAC	ATC	AAC	CTC	CCT	GAC	CTG	GTG	CAG	CAG	AGC	CAT	TCT	CCA	GCT	GGA	ACC	CCG	417
T	E	G	L	G	R	V	S	T	H	S	Q	E	M	D	S	G	T	E	Y	159
ACT	GAG	GGA	CTG	GGG	CGC	GTC	TCA	ACC	CAT	TCC	CAG	GAG	ATG	GAC	TCT	GGG	ACT	GAA	TAT	477
G	M	G	S	S	T	K	A	S	F	T	P	F	V	D	P	R	V	Y	Q	179
GGC	ATG	GGG	AGC	AGC	ACC	AAA	GCC	TCC	TTC	ACC	CCC	TTT	GTG	GAC	CCC	AGA	GTA	TAC	CAG	537
T	S	P	T	D	E	D	E	E	D	E	E	S	S	A	A	A	L	F	T	199
ACG	TCT	CCC	ACT	GAT	GAA	GAT	GAA	GAG	GAT	GAG	GAA	TCA	TCA	GCC	GCA	GCT	CTG	TTT	ACT	597
S	E	L	L	R	Q	E	Q	A	K	L	N	E	A	R	K	I	S	V	V	219
AGC	GAA	CTT	CTT	AGG	CAA	GAA	CAG	GCC	AAA	CTC	AAT	GAA	GCA	AGA	AAG	ATT	TCG	GTG	GTA	657
N	V	N	P	T	N	I	R	P	H	S	D	T	P	E	I	R	K	Y	K	239
AAT	GTA	AAC	CCA	ACC	AAC	ATT	CGG	CCT	CAT	AGC	GAC	ACA	CCA	GAA	ATC	AGA	AAA	TAC	AAG	717
K	R	F	N	S	E	I	L	C	A	A	L	W	G	V	N	L	L	V	G	259
AAA	CGA	TTC	AAC	TCA	GAA	ATA	CTT	TGT	GCA	GCT	CTG	TGG	GGT	GTA	AAC	CTT	CTG	GTG	GGG	777
T	E	N	G	L	M	L	L	D	R	S	G	Q	G	K	V	Y	N	L	I	279
ACT	GAA	AAT	GGC	CTG	ATG	CTT	TTG	GAC	CGA	AGT	GGG	CAA	GGC	AAA	GTC	TAT	AAT	CTG	ATC	837
N	R	R	R	F	Q	Q	M	D	V	L	E	G	L	N	V	L	V	T	I	299
AAC	CGG	AGG	GGA	TTT	CAG	CAG	ATG	GAT	GTG	CTA	GAG	GGA	CTG	AAT	GTC	CTT	GTG	ACA	ATT	897
S	G	K	K	N	K	L	R	V	Y	Y	L	S	W	L	R	N	R	I	L	319
TCA	GGA	AAG	AAG	AAT	AAG	CTA	CGA	GTT	TAC	TAT	CTT	TCA	TGG	TTA	AGA	AAC	AGA	ATA	CTA	957
H	N	D	P	E	V	E	K	K	Q	G	W	I	T	V	G	D	L	E	G	339
CAT	AAT	GAC	CCA	GAA	GTA	GAA	AAG	AAA	CAA	GGC	TGG	ATC	ACT	GTT	GGG	GAC	TTG	GAA	GGC	1017

Fig. 5

C	I	H	Y	K	V	V	K	Y	E	R	I	K	F	L	V	I	A	L	K	359
TGT	ATA	CAT	TAT	AAA	GTT	GTT	AAA	TAT	GAA	AGG	ATC	AAA	TTT	TTG	GTG	ATT	GCC	TTA	AAG	1077
N	A	V	E	I	Y	A	W	A	P	K	P	Y	H	K	F	M	A	F	K	379
AAT	GCT	GTG	GAA	ATA	TAT	GCT	TGG	GCT	CCT	AAA	CCG	TAT	CAT	AAA	TTC	ATG	GCA	TTT	AAG	1137
S	F	A	D	L	Q	H	K	P	L	L	V	D	L	T	V	E	E	G	Q	399
TCT	TTT	GCA	GAT	CTC	CAG	CAC	AAG	CCT	CTG	CTA	GTT	GAT	CTC	ACG	GTA	GAA	GAA	GGT	CAA	1197
R	L	K	V	I	F	G	S	H	T	G	F	H	V	I	D	V	D	S	G	419
AGA	TTA	AAG	GTT	ATT	TTT	GGT	TCA	CAC	ACT	GGT	TTC	CAT	GTA	ATT	GAT	GTT	GAT	TCA	GGA	1257
N	S	Y	D	I	Y	I	P	S	H	I	Q	G	N	I	T	P	H	A	I	439
AAC	TCT	TAT	GAT	ATC	TAC	ATA	CCA	TCT	CAT	ATT	CAG	GGC	AAT	ATC	ACT	CCT	CAT	GCT	ATT	1317
V	I	L	P	K																444
GTC	ATC	TTG	CCT	AAA																1332

Fig. 5 (continued)